Proposed City of San Diego Watershed Activities

for

Tijuana River Watershed

The Tijuana River Watershed Urban Runoff Management Plan is currently being prepared in collaboration with other jurisdictions, and drafts are not yet available. The following proposed City of San Diego watershed activities will be integrated into the final version of the Tijuana River Watershed Urban Runoff Management Plan and represent the City of San Diego's commitment to and anticipated efforts in the Tijuana River Watershed over the next five years. The final version of the plan will be submitted to the San Diego Regional Water Quality Control Board pursuant to requirements in the 2007 Municipal Permit (Order No. R9-2007-0001).

Tijuana River Watershed Management Area
Five-Year Plan of Action Matrix

Jurisdiction	911.1	911.2	911.3	911.4	911.5	911.6	911.7	911.8	Activity	Bacteria*	Dissolved Minerals	Gross Pollutants	Heavy Metals*	Nutrients	Oil & Grease	Organics	Pesticides	Sediment*	Trash	Monitoring	Source Investigation	Load Reduction	Education	Year 1 2007-2008	Year 2 2008-2009	Year 3 2009-2010	Year 4 2010-2011	Year 2011-2012
SD	X								ILACSD Trash Cleanup Sponsorship	X									X			X		I A	I A	I A	I A	I A
SD	X								SDCK Trash Cleanup Sponsorship	X									X			X		I A	I A	I A	I A	I A
SD	X								Alpha Project Trash Cleanups	X									X			X		I A				
SD	X								Targeted Restaurant Facility Inspections	X											X	X	X	P I A	P I A	P I A		
SD	X								Targeted Auto-Related Facility Inspections				X								X	X	X	P I A	P IA	P IA	P I A	
SD	X								Aggressive Street Sweeping				X					X				X				P	I	A
SD	X								Municipal Rain Barrel Installation	X				X	X		X	X				X		P I	A			
SD	X								Trash Segregation BMP Installation	X									X			X		P	P	I	A	
SD	X								Inlet Bacteria Treatment BMP Installation	X									X			X		P	P	I	A	
SD	X								"Green Mall" Infiltration Retrofit	X			X									X		P	P	I	A	
SD	X								Irrigation Controller & Xeriscaping Incentive Program	X	X		X	X	X		X	X				X					P	I A
SD	X								Pet Waste Dispenser Program	X					X							X					P	I A
SD	X								Karma/Karma Second Chance Public Service Announcements	X		X							X				X	I	I A	I A	I A	I A
SD	X								Mobile Advertising (General; Bacteria)	X		X	X		X		X	X	X				X	I A	I A	I A	I A	I A
SD	X								"Green Mall" Infiltration Retrofit Outreach	X			X		X				X			X	X	P	P	P I A	I A	I A
SD	X								Auto-Related Facility Outreach RE: New Codes & Increased Inspections	X			X		X				X			X	X	P	P I	P I	I A	I A

* High Priority Pollutants

Planning (P)
Monitoring (M)
Implementation (I)
Assessment (A)

TITLE: **I Love A Clean San Diego Trash Cleanup Sponsorship**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

Each spring, I Love A Clean San Diego (ILACSD) conducts its Creek to Bay Cleanup event to target various inland and coastal sites in San Diego County in need of trash and debris removal. ILACSD recruits and organizes site captains and groups of volunteers for each site. A media center is also designated, which promotes environmental stewardship, including the importance of keeping litter and debris from spoiling the region's watersheds. The whole event is marketed throughout San Diego County through a variety of media, including television, radio public service announcements, newspapers, newsletters, electronic mail, bulletin boards, community outreach activities, calendar listings, and word of mouth.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Creek to Bay Cleanup has historically been held in April of each year. Prior to that month, the City will coordinate with ILACSD staff to ensure that sites within the Tijuana River WMA are included in the list for cleanups and that proper sponsorship arrangements are made.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- ILACSD
- Volunteers from general public

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Gross Pollutants (in particular, Trash)

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria and trash as high priority water quality problems in the WMA and recommends implementing load reduction/source abatement activities to address them. Sponsorship of Creek to Bay will result in load reduction of trash and debris directly and of bacteria indirectly.

EXPECTED BENEFITS

Although Creek to Bay Cleanup is focused on debris removal, it also addresses bacteria indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[1] states that debris may be contaminated by pathogens that have adverse effects on humans. By reducing the amount of trash and debris in the Tijuana River WMA through cleanup events, bacteria loading is reduced.

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[1] http://www.epa.gov/owow/oceans/debris/

EFFECTIVENESS MEASUREMENTS

Management Questions:	• What is the load reduction associated with sponsorship? • What is the efficiency of trash cleanup? ($/person or $/ton collected)
Targeted Measurable Outcome(s)	• Achieve load reduction of trash (any amount) due to trash cleanup sponsorship
Assessment Method(s)	• Tabulation (e.g., number of participants) • Quantification (e.g., pounds of trash collected)
Assessment Measures, Assessment Outcome Levels & Data:	• Money spent (USD) (Outcome Level 1 and 2) • Tons of trash (Outcome Level 4) • Number of participants (Outcome Level 1) • Compliance (yes/no) (Outcome Level 1)

TITLE: San Diego Coastkeeper Trash Cleanup Sponsorship
ID NUMBER: XXX

ACTIVITY DESCRIPTION

Each fall, San Diego Coastkeeper conducts the Coastal Cleanup Day event to target various inland and coastal sites in San Diego County in need of trash and debris removal. Coastkeeper recruits and organizes site captains and groups of volunteers for each site. A media center is also designated, which promotes environmental stewardship, including the importance of keeping litter and debris from spoiling the region's watersheds. The whole event is marketed throughout San Diego County through a variety of media, including television, radio public service announcements, newspapers, newsletters, electronic mail, bulletin boards, community outreach activities, calendar listings, and word of mouth.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Coastal Cleanup Day has historically been held in September of each year. Prior to that month, the City will coordinate with Coastkeeper staff to ensure that sites within the Tijuana River WMA are included in the list for cleanups and that proper sponsorship arrangements are made.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper
- I Love A Clean San Diego
- Volunteers from general public

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Gross Pollutants (in particular, Trash)

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria and trash as high priority water quality problems in the WMA and recommends implementing load reduction/source abatement activities to address them. Sponsorship of Coastal Cleanup Day will result in load reduction of trash and debris directly and of bacteria indirectly.

EXPECTED BENEFITS

Although Coastal Cleanup Day is focused on debris removal, it also addresses bacteria indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[1] states that debris may be contaminated by pathogens that have

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[1] http://www.epa.gov/owow/oceans/debris/

adverse effects on humans. By reducing the amount of trash and debris in the Tijuana River WMA through cleanup events, bacteria loading is reduced.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• What is the load reduction associated with sponsorship? • What is the efficiency of trash cleanup? ($/person or $/ton collected)
Targeted Measurable Outcome(s)	• Achieve load reduction of trash (any amount) due to trash cleanup sponsorship
Assessment Method(s)	• Tabulation (e.g., number of participants) • Quantification (e.g., pounds of trash collected)
Assessment Measures, Assessment Outcome Levels & Data:	• Money spent (USD) (Outcome Level 1 and 2) • Tons of trash (Outcome Level 4) • Number of participants (Outcome Level 1) • Compliance (yes/no) (Outcome Level 1)

TITLE: **Alpha Project for the Homeless, Inc. Trash Cleanups**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

The City's Storm Water Pollution Prevention Division has partnered with Alpha Project for the Homeless, Inc., through a Memorandum of Understanding to conduct trash and debris cleanups and potentially homeless encampment removals throughout the City's jurisdiction in various watersheds in FY 2007 and FY 2008.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

The City will coordinate with Alpha Project to ensure that sites within the Tijuana River WMA are included in the list of sites to target for cleanups in FY 2008.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- Alpha Project for the Homeless, Inc.

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Gross Pollutants (in particular, Trash)

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria and trash as high priority water quality problems in the WMA and recommends implementing load reduction/source abatement activities to address them. Cleanups by Alpha Project will result in load reduction of trash and debris directly and of bacteria indirectly.

EXPECTED BENEFITS

Although the cleanups conducted by Alpha Project focus on debris removal, it also addresses bacteria indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[1] states that debris may be contaminated by pathogens that have adverse effects on humans. By reducing the amount of trash and debris in the Tijuana River WMA through cleanup events, bacteria loading is reduced.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• What is the load reduction associated with sponsorship? • What is the efficiency of trash cleanup? ($/person or $/ton collected)
Targeted Measurable Outcome(s)	• Achieve load reduction of trash (any amount) due to trash cleanup sponsorship

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[1] http://www.epa.gov/owow/oceans/debris/

Assessment Method(s)	• Tabulation (e.g., number of participants) • Quantification (e.g., pounds of trash collected)
Assessment Measures, Assessment Outcome Levels & Data:	• Money spent (USD) (Outcome Level 1 and 2) • Tons of trash (Outcome Level 4) • Number of participants (Outcome Level 1) • Compliance (yes/no) (Outcome Level 1)

TITLE: **Targeted Restaurant Facility Inspections**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

The Storm Water Pollution Prevention Division (Storm Water Division) is developing a focused inspection activity to target restaurant facilities within the Tijuana River WMA. The purpose of the activity is to:

- Determine the most efficient frequency of inspections to ensure proper BMP implementation and reduce pollutant loading (e.g., once vs. twice per fiscal year)
- Determine the most efficient type of inspection to ensure proper BMP implementation and reduce pollutant loading (e.g., random inspections vs. scheduled inspections)
- Determine the most efficient combination of enforcement action to ensure proper BMP implementation and reduce pollutant loading (e.g., education/flyers vs. monetary fines vs. onsite direct interactions)
- Characterize activities at restaurant metals-related industrial facilities to determine which activities cause the greatest pollutant discharges to better direct focused education/outreach and enforcement efforts
- Track and analyze inspection and enforcement actions to estimate load reductions resulting from inspections

The Storm Water Division will delineate a specific area within the Tijuana River WMA to conduct the targeted inspections based on factors, such as monitoring data, facility clustering, and proximity to other watershed activities being conducted. Discharges cleaned up, behaviors corrected, and sources abated will also be reported. The Storm Water Division anticipates using the knowledge and experience gained through this activity to optimize the City's jurisdictional industrial and commercial facility inspection program to meet Municipal Permit and potential TMDL requirements.

TMDL APPLICABILITY
- N/A

TIME SCHEDULE FOR IMPLEMENTATION
Activity planning began in July 2007. The Storm Water Division anticipates selecting and hiring a consultant on board by the end of calendar year 2007 to help develop and implement the activity within FY 2008 through FY 2010.

PARTICIPATING WATERSHED COPERMITTEE(S)
- City of San Diego

OTHER PARTICIPATING ENTITIES
- N/A

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED
- Bacteria

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Implementation of this focused inspection activity will contribute to addressing discharges, correct behaviors, and abate sources associated with bacteria.

EXPECTED BENEFITS

This focused inspection activity will contribute to reducing discharges, characterizing activities, correcting behaviors, and abating sources associated with bacteria at restaurant facilities. Knowledge and experience gained through this activity would help the City optimize its jurisdictional industrial and commercial facility inspection program.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• Do inspections increase rate of BMP implementation? • Does increased rate of BMP implementation effect load reduction? • What is the optimal frequency of inspection (point of diminishing returns)? • Are spot inspections more effective than scheduled inspections? • Does enforcement alter future behavior (implementing BMPs)? • Does education increase rate of BMP implementation? • How can an estimate of load reduction be made from inspection data?
Targeted Measurable Outcome(s)	• Achieve load reduction from optimized inspection rate • Achieve greater BMP implementation from optimized inspection rate
Assessment Method(s)	• Inspections (e.g., track number of BMPs implemented, increased number of BMPs, number of follow-up inspections) • Quantification (e.g., use frequency of BMP implementation to calculate estimated load reduction) • Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction) • Tabulation (e.g., amount of money spent on inspections, amount of money spent on educational materials) • Reporting (e.g., estimates of load reduction for BMPs from 3rd party data)
Assessment Measures, Assessment Outcome Levels & Data:	• Number of inspections (spot and scheduled) (Outcome Level 1) • Number of BMPs implemented (Outcome Level 1) • Change (%) in BMP implementation pre and post-education (Outcome Level 3) • Number of missing BMPs (Outcome Level 1) • Number of follow-up inspections (Outcome Level 1) • Number of enforcement follow-ups (Outcome Level 1) • Number of educational information items passed out (Outcome Level 1) • How much money spent on inspections (follow ups, initial inspections, enforcement actions)? (Outcome Level 1) • Literature review or other information to provide data to estimate load reductions (Outcome Level 3) • Dataset of load contributions for specific activities (Outcome Level 4)

TITLE: **Targeted Auto-Related Facility Inspections**
ID NUMBER: <mark>XXX</mark>

ACTIVITY DESCRIPTION

The Storm Water Pollution Prevention Division (Storm Water Division) is developing a focused inspection activity to target auto-related facilities within the Tijuana River WMA. The purpose of the activity is to:

- Determine the most efficient frequency of inspections to ensure proper BMP implementation and reduce pollutant loading (e.g., once vs. twice per fiscal year)
- Determine the most efficient type of inspection to ensure proper BMP implementation and reduce pollutant loading (e.g., random inspections vs. scheduled inspections)
- Determine the most efficient combination of enforcement action to ensure proper BMP implementation and reduce pollutant loading (e.g., education/flyers vs. monetary fines vs. onsite direct interactions)
- Characterize activities at auto-related facilities to determine which activities cause the greatest pollutant discharges to better direct focused education/outreach and enforcement efforts
- Track and analyze inspection and enforcement actions to estimate load reductions resulting from inspections

The Storm Water Division will delineate a specific area within the Tijuana River WMA to conduct the targeted inspections based on factors, such as monitoring data, facility clustering, and proximity to other watershed activities being conducted. Discharges cleaned up, behaviors corrected, and sources abated will also be reported. The Storm Water Division anticipates using the knowledge and experienced gained through this activity to optimize the City's jurisdictional industrial and commercial facility inspection program to meet Municipal Permit and potential TMDL requirements.

TMDL APPLICABILITY
- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Activity planning began in July 2007. The Storm Water Division anticipates selecting and hiring a consultant on board by the end of calendar year 2007 to help develop and implement the activity within FY 2008 through FY 2011.

PARTICIPATING WATERSHED COPERMITTEE(S)
- City of San Diego

OTHER PARTICIPATING ENTITIES
- N/A

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED
- Metals

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies metals as a high priority water quality problem in the WMA and recommends implementing load reduction/source abatement activities to address it. Implementation of this focused inspection activity will contribute to addressing discharges, correct behaviors, and abate sources associated with metals.

EXPECTED BENEFITS

This focused inspection activity will contribute to reducing discharges, characterizing activities, correcting behaviors, and abating sources associated with metals at auto-related facilities. Knowledge and experience gained through this activity will help the City optimize its jurisdictional industrial and commercial facility inspection program.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• Do inspections increase rate of BMP implementation? • Does increased rate of BMP implementation effect load reduction? • What is the optimal frequency of inspection (point of diminishing returns)? • Are spot inspections more effective than scheduled inspections? • Does enforcement alter future behavior (implementing BMPs)? • Does education increase rate of BMP implementation? • How can an estimate of load reduction be made from inspection data?
Targeted Measurable Outcome(s)	• Achieve load reduction from optimized inspection rate • Achieve greater BMP implementation from optimized inspection rate
Assessment Method(s)	• Inspections (e.g., track number of BMPs implemented, increased number of BMPs, number of follow-up inspections) • Quantification (e.g., use frequency of BMP implementation to calculate estimated load reduction) • Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction) • Tabulation (e.g., amount of money spent on inspections, amount of money spent on educational materials) • Reporting (e.g., estimates of load reduction for BMPs from 3rd party data)
Assessment Measures, Assessment Outcome Levels & Data:	• Number of inspections (spot and scheduled) (Outcome Level 1) • Number of BMPs implemented (Outcome Level 1) • Change (%) in BMP implementation pre and post-education (Outcome Level 3) • Number of missing BMPs (Outcome Level 1) • Number of follow-up inspections (Outcome Level 1) • Number of enforcement follow-ups (Outcome Level 1) • Number of educational information items passed out (Outcome Level 1) • How much money spent on inspections (follow ups, initial inspections, enforcement actions)? (Outcome Level 1) • Literature review or other information to provide data to estimate load reductions (Outcome Level 3) • Dataset of load contributions for specific activities (Outcome Level 4)

TITLE: Tijuana River Watershed Street Sweeping
ID NUMBER: XXX

ACTIVITY DESCRIPTION

The City's Storm Water Pollution Prevention Division (Storm Water Division) will coordinate with the City's Street Division to conduct a street sweeping effectiveness study in the Tijuana River WMA. The study will investigate the effectiveness of top-tier street sweepers compared to that of the City's current sweepers in reducing the accumulation of metals on City streets and whether changes to the current street sweeping schedule (baseline) will assist the City in attaining its water quality goals. The City's objective in conducting this study will be to reduce the street accumulation of debris containing metals that may then migrate via storm water and other urban runoff to the storm water conveyance system and eventually into impaired receiving waters. The study will include the purchase of new types of sweepers, the dedication of operators; assignment of the sweepers to designated routes within identified priority areas; and a monitoring program to assess the effectiveness of the sweepers and frequency.

The City will use the prioritization process that is outlined in its *Strategic Plan for Watershed Activity Implementation* (July 2007) to target areas within the Tijuana River WMA.

TMDL APPLICABILITY
- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Project planning is anticipated to begin in July 2009. The City anticipates sweeping to start within FY 2011. Debris testing and water quality monitoring will be conducted throughout the project to assess effectiveness in removing metals from City streets.

PARTICIPATING WATERSHED COPERMITTEE(S)
- City of San Diego

OTHER PARTICIPATING ENTITIES
- N/A

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED
- Metals
- Gross Pollutants (in particular, Trash)

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies metals and trash as high priority water quality problems in the WMA and recommends implementing load reduction/source abatement activities to address them. Targeted increased sweeping will target metals and trash City streets.

EXPECTED BENEFITS

The street sweeping effectiveness study will consist of acquiring top-tier street sweepers to operate within the Tijuana River WMA and assessing their effectiveness in reducing the

accumulation of metals and trash on area streets through an effectiveness assessment monitoring program. This study will augment the City's current sweeping efforts in order to also determine the optimum frequency of sweeping, starting at the present baseline schedule, towards reducing the loading of metals. The monitoring program is anticipated to include water quality and debris monitoring.

This activity will simultaneously address requirements under the Municipal Permit and potential metals-related TMDLs.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• Which street sweeping machine is most effective in removing contaminants of concern (mechanical or vacuum-assisted)? • Is sweeping more frequently more effective than less frequent street sweeping in debris removal? • What is the optimal street sweeping frequency/method? • What is the impact of street sweeping on COCs in stormwater runoff?
Targeted Measurable Outcome(s)	• Load reduction for sediments and metals based on monitoring information • Receiving water quality improvement
Assessment Method(s)	• Monitoring (e.g., collect data to estimate loads, concentrations of COCs in runoff) • Tabulation (e.g., amount of money to buy vacuum assisted street sweepers) • Quantification (e.g., load estimate comparison between sweeping methods)
Assessment Measures, Assessment Outcome Levels & Data:	• Tons of debris removed by land use for mechanical and vacuum-assisted sweepers (Outcome Level 4) • Frequency of removal correlated to tons of debris removed (Outcome Level 1 and 4) • Post-sweeping COC concentrations in runoff (Outcome Level 4) • Cost of vacuum-assisted sweepers (Outcome Level 1) • Cost of increased/decreased frequency of sweeping (man-hours, equipment costs, etc) (Outcome Level 1)

TITLE: **Municipal Rain Barrel Installation and Downspout Disconnects**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

This activity will involve the installation of rain barrels and/or the disconnection of downspouts to direct runoff from municipal facility roofs into pervious areas (such as landscaping) for infiltration. Rain barrels, downspout disconnects, and rainwater harvesting/reuse systems help to capture, store, and divert urban runoff to reduce the volume thereof, thus contributing to reduced flooding, erosion, and the contamination of surface water with sediment, fertilizer, metals, and pesticides. In addition, this activity has the added benefit of water conservation; runoff collected and diverted to landscaping would help reduce the amount of potable water needed for irrigation. Roof runoff solutions can be used both in large-scale landscapes, such as municipal buildings, community centers, schools, and commercial sites, as well as in small residential landscapes.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Project planning began in July 2007 and is anticipated to continue until the end of calendar year 2007. Procurement of rain barrels and other items and installation are anticipated to occur from November 2007 through February 2008.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Metals
- Bacteria
- Pesticides
- Sediment

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies metals, bacteria, pesticides, and sediment as high priority water quality problems in the Pueblo Watershed (more specifically Hydrologic Area 908.2) and recommends implementing load reduction/source abatement activities to address them. Implementation of this activity will address the high priority water quality problems by reducing runoff volume via capture, retention, and infiltration.

EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing runoff volume via capture, retention, and eventual infiltration.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (July 2007), which calls for the piloting of rain barrels, downspout disconnects, and rainwater harvesting/reuse systems to reduce urban runoff volume and pollution. Knowledge and experience gained through this activity will help the City document the benefits, limitations, and challenges of rain barrels and downspout disconnects as urban runoff pollution controls before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and potential TMDL requirements.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• What is the effectiveness/efficiency of rain barrel/rain-harvesting systems in reducing stormwater runoff volume? • What is the loading reduction of different systems? • Which system is most efficient in collecting and/or diverting rainwater? • Which system results in the largest load reductions?
Targeted Measurable Outcome(s)	• Reduction in pollutant loads due to rain barrel installation
Assessment Method(s)	• Monitoring (e.g., load reduction estimation) • Quantification (e.g., calculation of load reductions, or estimates of change) • Tabulation (e.g., number of rain barrel systems installed, amount of money spent) • Reporting (e.g., 3rd party data to estimate load reductions)
Assessment Measures, Assessment Outcome Levels & Data:	• Cost of rain barrel systems (Outcome Level 1 and 2) • Cost of maintenance/upkeep (Outcome Level 1 and 2) • Cost of implementation (Outcome Level 1 and 2) • Volume of stormwater captured/diverted (Outcome Level 4) • Concentrations of COCs in rainwater or runoff (measured in rain barrel systems) (Outcome Level 4) • Compare 3rd party data to measured data for load reduction comparisons (Outcome Level 3) • What is the percent capture of the different systems (acres drained) (Outcome Level 4)

TITLE: **Trash Segregation Device Installation**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

This project will involve the installation of devices along certain right-of-ways in the Tijuana River WMA to prevent trash and debris from entering the MS4. Runoff entering an inlet with such a device will be cleaned of large trash and debris. It is anticipated that accumulation of such pollutants at the mouth of inlets will facilitate their collection by City crews using street sweepers. The City will study the effectiveness (in terms of load reduction) and the efficiency (in terms of load reduction divided by cost) of such devices in improving discharge and water quality impaired by bacteria, both in absolute terms and relative to other potential activities.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Project planning began in July 2007, and project design is anticipated to continue through FY 2009. Installation is anticipated to occur in FY 2010. Water quality monitoring will be conducted before and after installation to assess the effectiveness in bacteria and trash loading.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Gross Pollutants (in particular, Trash)

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria and gross pollutants as high priority water quality problem in the WMA and recommends implementing load reduction/source abatement activities to address them. Implementation of this activity will address bacteria via the facilitation of trash and debris removal.

EXPECTED BENEFITS

Implementation of this activity will reduce bacteria loading via facilitation of trash and debris removal. Literature published by the United States Environmental Protection Agency on its website[1] states that debris may be contaminated by pathogens that have adverse effects on humans. By reducing the amount of trash and debris in the Tijuana River WMA, bacteria loading is reduced.

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[1] http://www.epa.gov/owow/oceans/debris/

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (July 2007), which calls for the piloting of trash segregation devices to reduce bacteria loading via facilitation of trash and debris removal. In addition, knowledge and experience gained through this activity will help the City document the benefits, limitations, and challenges of trash segregation devices as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and potential TMDL requirements.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• Which type of trash segregation device facilitates the most efficient removal of trash and debris? • What is the load reduction efficiency of trash segregation devices in facilitating removal of trash? • How effective are trash segregation devices at facilitating reduction of loads of trash?
Targeted Measurable Outcome(s)	• Determination of most efficient and effective trash segregation device • Reduction in trash based on amount removed from areas with devices • Receiving water quality improvement (less observed trash in receiving water downstream)
Assessment Method(s)	• Inspections (e.g., ensure the retrofit is working as designed) • Quantification (e.g., use drainage area and rainfall information to calculate estimated load reduction) • Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction) • Tabulation (e.g., amount of money spent on implementation and maintenance, amount of money spent on educational materials)
Assessment Measures, Assessment Outcome Levels & Data:	• Number of inspections (Outcome Level 1) • Change (%) in load reduction pre and post-implementation (Outcome Level 4) • How much money spent on inspections and maintenance (Outcome Level 1) • Dataset of load contributions for specific activities (Outcome Level 4)

TITLE: **Inlet Bacteria Treatment BMP Installation**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

This project will involve the installation of inlet treatment devices along certain right-of-ways in the Tijuana River WMA in conjunction with trash segregation devices to treat runoff of bacteria entering the MS4. Runoff entering an inlet will be directed through a filter box to be sterilized of bacteria and then discharged. The City will study the effectiveness (in terms of load reduction) and the efficiency (in terms of load reduction divided by cost) of such devices in improving discharge and water quality impaired by bacteria, both in absolute terms and relative to other potential activities. The City hopes to determine the effect of such devices on discharge and water quality in combination with other activities, such as aggressive street sweeping.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Project planning began in July 2007, and project design is anticipated to continue through FY 2009. Installation is anticipated to occur in FY 2010. Water quality monitoring will be conducted before and after installation to assess the project's effectiveness in reducing bacteria loading.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria as a high priority water quality problem in the Pueblo Watershed (more specifically Hydrologic Area 908.2) and recommends implementing load reduction/source abatement activities to address it. Implementation of this activity will address bacteria via inlet treatment.

EXPECTED BENEFITS

Implementation of this activity will reduce bacteria loading via inlet treatment.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (July 2007), which calls for the piloting of inlet treatment BMPs to reduce bacteria loading. Knowledge and experience gained through this activity would help the City document the benefits, limitations, and challenges of inlet treatment as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and potential TMDL requirements.

EFFECTIVENESS MEASUREMENTS

Management Questions:	- Which type of inlet bacteria treatment BMP provides the most efficient removal of trash and debris? - What is the load reduction efficiency of inlet bacterial treatment BMPs in reducing bacteria? - How effective are bacteria treatment BMPs at reducing loads of bacteria?
Targeted Measurable Outcome(s)	- Determination of most efficient and effective inlet bacteria treatment BMP - Reduction in bacteria based on amount removed from hydrodynamic separator - Discharge water quality improvement (less bacteria exceedances per monitoring)
Assessment Method(s)	- Inspections (e.g., ensure the inserts are working as designed) - Quantification (e.g., use drainage area and rainfall information to calculate estimated load reduction) - Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction) - Tabulation (e.g., amount of money spent on implementation and maintenance, amount of money spent on educational materials)
Assessment Measures, Assessment Outcome Levels & Data:	- Number of inspections (Outcome Level 1) - Change (%) in load reduction pre and post-implementation (Outcome Level 4) - How much money spent on inspections and maintenance (Outcome Level 1) - Dataset of load contributions for specific activities (Outcome Level 4)

TITLE: Infiltration BMP Retrofit
ID NUMBER: XXX

ACTIVITY DESCRIPTION

This activity will involve the implementation of an infiltration project in the Tijuana River WMA to reduce runoff volume. The activity may be implemented in a municipal parking lot ("Green Mall"), an industrial/commercial right-of-way ("Green Mall"), or a residential right-of-way ("Green Street"). Exact location and type will be based on monitoring and geotechnical considerations, proximity to other BMPs being implemented, site availability, land use, etc. The pollutant load reduction resulting from this activity will contribute to meeting requirements under the Municipal Permit and potential TMDLs in the receiving waters of the WMA.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Project planning began in July 2007, and project design is anticipated to continue through FY 2009. Construction is anticipated to occur in FY 2010. Water quality monitoring will be conducted before and after construction to assess the effectiveness in reducing runoff volume and pollutant loading.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Metals
- Bacteria

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies metals and bacteria as high priority water quality problems in the Pueblo Watershed (more specifically Hydrologic Area 908.2) and recommends implementing load reduction/source abatement activities to address them. Implementation of this activity will address both high priority water quality problems by reducing and treating runoff volume via infiltration/retention.

EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing and treating runoff volume of pollutants via infiltration/retention.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (July 2007), which calls for the piloting of infiltration/retention BMPs to reduce urban runoff pollution. Knowledge and experience gained through this activity will help the City document the benefits, limitations, and challenges of

infiltration/retention as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and potential TMDL requirements.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• What is the load reduction efficiency of LID BMP retrofits? • How effective are LID BMP retrofits at reducing loads of priority pollutants? • Does the implementation of LID BMP retrofits result in a detectible receiving water quality improvement?
Targeted Measurable Outcome(s)	• Reduction in priority pollutant loads • Receiving water quality improvement
Assessment Method(s)	• Inspections (e.g., ensure the retrofit is working as designed) • Quantification (e.g., use drainage area and rainfall information to calculate estimated load reduction) • Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction) • Tabulation (e.g., amount of money spent on implementation and maintenance, amount of money spent on educational materials) • Reporting (e.g., estimates of load reduction from 3rd party data)
Assessment Measures, Assessment Outcome Levels & Data:	• Number of inspections (Outcome Level 1) • Change (%) in load reduction pre and post-implementation (Outcome Level 4) • Number of educational information items passed out (Outcome Level 1) • How much money spent on inspections and maintenance (Outcome Level 1) • Literature review or other information to provide data to estimate load reductions (Outcome Level 3) • Dataset of load contributions for specific activities (Outcome Level 4)

TITLE: **Irrigation Controller and Xeriscaping Incentive Program**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

This activity will involve launching a pilot incentive program to encourage the use of weather-based irrigation devices and xeriscaping to reduce over-irrigation and the overall need for landscaping irrigation. Specific residential and commercial areas will be targeted and monitored to assess the efficiency of the incentive program in reducing runoff volume and pollutant loads. It is also anticipated that the program will include a component to investigate the challenges to getting residents and businesses to participate in this incentive program to better focus subsequent education and outreach efforts and determine whether broad-scale implementation should be pursued.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Project planning and coordination is anticipated to begin in July 2010. Program launch is anticipated to occur in FY 2012.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter
- City of San Diego Water Department (to be invited to participate)
- San Diego County Water Authority (to be invited to participate)

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Pesticides
- Nutrients
- Heavy Metals

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria, pesticides, nutrients, and heavy metals as high priority water quality problems in the WMA and recommends implementing activities to address them. Implementation of this activity will address the high priority water quality problems by reducing dry weather flows resulting from over-irrigation.

EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing dry weather flows resulting from over-irrigation. Reduction of runoff means less pollutants conveyed into the storm drain system and out into receiving waters. Water conservation will also be an added benefit as program participants waste less water on irrigation.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (July 2007), which calls for the piloting and monitoring of an irrigation runoff reduction program to combat urban pollution. Knowledge and experience gained through this activity will help the City document the benefits, limitations, and challenges of irrigation runoff reduction programs as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and TMDL requirements.

EFFECTIVENESS MEASUREMENTS

Management Questions:	• Does increased education help reduce dry weather runoff? • Do incentives and/or rebates increase the rate of low-runoff irrigation device installation? • Do neighborhoods targeted for outreach or incentives exhibit fewer incidence of dry weather runoff? • How does the incidence of dry weather runoff relate to load reduction?
Targeted Measurable Outcome(s):	• Achieve zero dry weather runoff in target neighborhoods
Assessment Method(s):	• Inspections (e.g., track number of target behaviors observed, decrease in observed behavior, number of follow-up inspections) • Quantification (e.g., use frequency of observed behavior to calculate estimated load reduction) • Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction) • Tabulation (e.g., amount of money spent on inspections, amount of money spent on educational materials) • Reporting (e.g., estimates of load reduction for BMPs from 3rd party data)
Assessment Measures, Assessment Outcome Levels & Data:	• Number of incentives or rebates distributed (Outcome Level 1) • Change (%) in target behavior pre and post-outreach (Outcome Level 3) • Number of follow-up inspections (Outcome Level 1) • How much money spent on inspections (follow ups, initial inspections)? (Outcome Level 1) • Literature review or other information to provide data to estimate load reductions (Outcome Level 3) • Dataset of load contributions for specific activities (Outcome Level 4)

TITLE: **Pet Waste Bag Dispenser Program**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

This activity will target municipal parks in the Tijuana River WMA that are suitable for pet waste bag dispensers and in some cases increased numbers of dispensers. When pet waste bags are available, pet owners are more apt to pick up pet wastes and dispose of it properly, thereby eliminating pollutants from the environment and potentially from receiving waters.

TMDL APPLICABILITY

- N/A

TIME SCHEDULE FOR IMPLEMENTATION

Project planning and coordination is anticipated to begin in July 2010. Program launch is anticipated to occur in FY 2012.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- N/A

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria as a high priority water quality problem in the WMA and recommends implementing load reduction/source abatement activities to address them. Implementation of this activity will address the high priority water quality problems by reducing exposed pet waste carrying bacteria.

EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing the amount of pet waste in municipal parks exposed to wash-off and carried into the storm drain system and receiving waters by runoff.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (November 2007), which identifies the installation of pet waste bag dispensers as a potential activity to pilot the combat of urban runoff pollution. Knowledge and experience gained through this activity will help the City document the benefits, limitations, and challenges of pet waste bag dispensers as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction. Information gained through the pilot activity will assist the City in meeting Municipal Permit and TMDL requirements.

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EFFECTIVENESS MEASUREMENTS

Management Questions:	• Does the implementation of dog waste bag dispenser stations help reduce bacteria? • What is the estimated load reduction efficiency of implementing dog waste bag dispenser stations? • Can the number of pet waste bags dispensed be related to a reduction in bacteria in run-off from the park?
Targeted Measurable Outcome(s):	• Number of pet waste bags distributed • Reduction in bacteria in run-off from the park • Receiving water quality improvement (less observed bacteria in receiving water downstream)
Assessment Method(s):	• Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction) • Quantification (e.g., use number of pet waste disposal bags and rainfall information to calculate estimated load reduction) • Tabulation (e.g., amount of money spent on implementation and maintenance, amount of money spent on educational materials, amount of money spent on pet waste disposal bags)
Assessment Measures, Assessment Outcome Levels & Data:	• Change (%) in load reduction pre and post-implementation (Outcome Level 4) • How much money spent on implementation and maintenance (Outcome Level 1) • Dataset of load contributions for specific activities (Outcome Level 4) • Change in use of pet waste disposal bags (Outcome Level 1)

TITLE: **Public Service Announcements: *Karma* and *Karma Second Chance***
ID NUMBER: XXX

ACTIVITY DESCRIPTION

The City's Storm Water Division has retained a contract with a film production company to create two Public Service Announcements (PSAs) specifically focused on bacteria, with gross pollutants (trash) profiled as a vector. The PSAs are entitled, *Karma* and *Karma Second Chance*, and the goal of the PSAs is to educate the public about causes of pollution and to encourage positive behavioral change. These PSAs were developed in FY 2007 and FY 2008, and will be broadcast on several television and radio stations throughout the Tijuana River WMA in FY 2008. The PSAs will be broadcast in both English and Spanish.

TMDL APPLICABILITY

* None

TIME SCHEDULE FOR IMPLEMENTATION

The City will coordinate completion of production in FY 2008, and then will work with various broadcast media outlets to distribute and air the PSAs in FY 2008 and FY 2009.

PARTICIPATING WATERSHED COPERMITTEE(S)

* City of San Diego

OTHER PARTICIPATING ENTITIES

* Various Television and Radio Stations in San Diego

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

* Bacteria
* Gross Pollutants (Trash)

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria and gross pollutants as high priority water quality problems in the WMA. The *Karma* and *Karma Second Chance* PSAs will result in increased knowledge and awareness regarding bacteria, and trash as a vector, and result in future load reduction of trash and debris directly and of bacteria indirectly.

EXPECTED BENEFITS

The PSAs address bacteria directly by focusing on pet waste, food waste and organic matter, and indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[1] states that *pathogens* are microscopic organisms like bacteria and viruses. They come from untreated or poorly treated sewage, pet and farm animal waste, and improperly handled medical waste. Pathogens in the water in unsafe amounts result in beach closures; shellfish bed closures, fish kills, and human health problems.

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[1] http://www.epa.gov/owow/oceans/debris/

EFFECTIVENESS MEASUREMENTS

PSA effectiveness will be measured on a variety of levels, to include the number of households (television) or listeners (radio) reached by the program will be tabulated. Second, awareness attitude data will be collected via surveys. Third, once the PSA have aired, another survey will be conducted to assess changes in knowledge and/or behavior. Recipients responding to and participating in the survey will also be assessed, such as volunteers, or those who agreed to commit to the project.

TITLE: Mobile Advertising
ID NUMBER: XXX

ACTIVITY DESCRIPTION

The City's Storm Water Division has retained a mobile advertising company to advertise *Think Blue* messages on its static billboard trucks in the Tijuana River WMA. The City intends to create advertisements that target behaviors associated with bacteria and/or sediment. The goal of the billboards is to educate the public about causes of these kinds of pollution and to encourage positive behavioral change. These advertisements will be developed in FY 2008, and will be displayed throughout the Tijuana River WMA in both English and Spanish.

TMDL APPLICABILITY

- None

TIME SCHEDULE FOR IMPLEMENTATION

The City will coordinate with its Printing Services Division in the design of the advertisements and will have them created and placed on static billboard trucks. The trucks will drive pre-determined routes in the Tijuana River WMA in an effort to reach targeted, high priority areas within the WMA to increase awareness and promote behavior change.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- None

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Tijuana River WMA identifies bacteria as a high priority water quality problem in the WMA and recommends implementing load reduction/source abatement activities to address it. Utilizing the static billboard trucks will result in increased knowledge and awareness directly and will promote behavior change.

EXPECTED BENEFITS

The billboard advertisements will address bacteria to increase knowledge awareness and promote behavior change.

EFFECTIVENESS MEASUREMENTS

Advertisement effectiveness will be measured via Citywide telephone surveys and focus groups comprised of residents in the Tijuana River WMA.

TITLE: **Green Mall Infiltration Retrofit Education and Outreach**
ID NUMBER: XXX

ACTIVITY DESCRIPTION

The City's Storm Water Division will conduct targeted education and outreach to Tijuana community residents and/or businesses for the implementation of an infiltration project in the Tijuana River WMA to reduce runoff volume. The activity may be implemented in a municipal parking lot ("Green Mall"), an industrial/commercial right-of-way ("Green Mall"), or a residential right-of-way ("Green Street"). Exact location and type will be based on monitoring and geotechnical considerations, proximity to other BMPs being implemented, site availability, land use, etc. The pollutant load reduction resulting from this activity will contribute to meeting requirements under the Municipal Permit and potential TMDLs in the receiving waters of the WMA. The City intends to target auto-related business areas within the Tijuana River WMA in an effort to reduce the amount of metals impacting the watershed.

The City has retained several professional outreach consultants to assist, develop and initiate the public participation and education campaign associated with the infiltration retrofit. Activities will include recommendations for education and outreach strategies, which may include surveys, public participation, incentives and specific messaging among others.

TMDL APPLICABILITY

- None

TIME SCHEDULE FOR IMPLEMENTATION

Infiltration project planning began in July 2007, and project design is anticipated to continue through FY 2009. Construction is anticipated to occur in FY 2010. Water quality monitoring will be conducted before and after construction to assess the effectiveness in reducing runoff volume and pollutant loading. Outreach associated with this activity will follow a similar time schedule.

PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

OTHER PARTICIPATING ENTITIES

- None

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Metals
- Bacteria

CONSISTENCY WITH THE WATERSHED STRATEGY

The Collective Watershed Strategy identifies metals and bacteria a high priority water quality problems in the Tijuana River WMA and recommends implementing load reduction/source abatement activities to address it. Construction of the Green Mall project coupled with education and outreach efforts will result in both load reductions due to structural Best Management

Practices as well as increased knowledge and awareness in an effort to promote sustained behavior change.

EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing and treating runoff volume of pollutants via infiltration/retention. Additionally, increased education and outreach to residents and/or businesses in the Tijuana River WMA regarding metals and/or bacteria will increase knowledge awareness of water quality issues in the area and promote behavior change.

EFFECTIVENESS MEASUREMENTS

Green Mall Retrofit effectiveness will be measured via increased inspections and water monitoring initiatives, while awareness and behavior change will be measured via a Citywide telephone surveys and focus groups comprised of residents in the Tijuana River WMA.

TITLE: **Targeted Auto-Related Facility Inspections (Tijuana River)**
ID NUMBER: <mark>XXX</mark>

ACTIVITY DESCRIPTION
The Storm Water Division is developing an education and outreach strategy to target auto-related facilities within the Tijuana River WMA. The goals of this outreach activity are to educate auto-related facilities regarding the potential impacts their businesses have on water quality and provide information regarding increased City monitoring and inspections in the area.

The City has retained several professional outreach consultants to assist, develop and initiate the public participation and education campaign. Activities will include recommendations for education and outreach strategies, which may include surveys, public participation, incentives and specific messaging among others.

TMDL APPLICABILITY
- N/A

TIME SCHEDULE FOR IMPLEMENTATION
Inspection planning began in July 2007. The Storm Water Division anticipates selecting and hiring a consultant by the end of calendar year 2007 to help develop and implement the inspections FY 2008 through FY 2011. Education outreach associated with the inspections will correspond to these schedules.

PARTICIPATING WATERSHED COPERMITTEE(S)
- City of San Diego

OTHER PARTICIPATING ENTITIES
- N/A

HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED
- Metals

CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY
The Collective Watershed Strategy for the Tijuana River WMA identifies metals as a high priority water quality problem in the WMA and recommends implementing load reduction/source abatement activities to address it. Implementation of this education and outreach strategy will contribute to addressing discharges, correcting behaviors, and abating sources associated with metals.

EXPECTED BENEFITS
Education and outreach in the area is designed to increase awareness and promote behavior change with the overall goal of reducing discharges, correcting behaviors, and abating sources associated with metals at auto-related facilities. Knowledge and experience gained through this activity will help the City optimize its jurisdictional, industrial, and commercial facility inspection program.

EFFECTIVENESS MEASUREMENTS

Auto-related facilities outreach and education effectiveness will be measured via increased monitoring and inspections, while awareness and behavior change will be measured via a Citywide telephone surveys and focus groups comprised of businesses in the Tijuana River WMA.